

SEARCH REQUEST FORM

Scientific and Technical Information Center

—— F.	- 1			
Requester's Full Name: Jeffa			Date: 10 - 15 20	<u>52</u>
Art Unit: 1657 Phone No	imber 30 <u>8-3775</u>	Serial Number:	79(808.832	
Mail Box and Bldg/Room Location:	Resul	Its Format Preferred (cir	cle): PAPER DISK E	-MAIL
If more than one search is submit		e searches in order of		EJ ******
Please provide a detailed statement of the se				ied.
Include the elected species or structures, ke				
utility of the invention. Define any terms the known. Please attach a copy of the cover sh		-	evant citations, authors, etc	, 11
Y				
Title of Invention: Peptalase - cla				
Inventors (please provide full names):			P. Dowling N. Grace	سنده
W. Han, C. High, P. Hvan		DiMeo		
Earliest Priority Filing Date: 3-13	1-2001	_		
For Sequence Searches Only Please include	all pertinent information (p	arent, child, divisional, or issu	ed patent numbers) along wi	th the
Plese see- d SEQ	70 VP: 186 (XPLGXYL)	In STN	
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STAFF USE ONLY	Type of Search	Vendors and cos	t where applicable	100
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Date Searcher Picked Up: 10 18 02	Bibliographic	Dr.Link	Y	. ```
Date Completed: 10 24 0 2	Litigation	Lexis/Nexis		<u>.</u>
Searcher Prep & Review Time:	Fulltext	Sequence Systems		•
Clerical Prep Time:	Patent Family	WWW/Internet		~
Online Time: 12	Other	Other (specify)		-·
PTO-1590 (8-01)				
			1	

Russel 09/808,832Page 1

=> fil hcaplu FILE 'HCAPLUS' ENTERED AT 13:09:09 ON 23 OCT 2002 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE COVERS 1907 - 23 Oct 2002 VOL 137 ISS 17 FILE LAST UPDATED: 22 Oct 2002 (20021022/ED)

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4 SEA FILE=REGISTRY XPLGXYL/SQSP L.1 371099 SEA FILE=REGISTRY SOL=<10 L24 SEA FILE=REGISTRY L1 AND L2 L3 T.4 1 SEA FILE=HCAPLUS L3

=> d ibib abs hitrn 14

ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS ACCESSION NUMBER: 2001:693138 HCAPLUS

DOCUMENT NUMBER: 135:273218 TITLE:

Preparation of peptidase-cleavable, targeted antineoplastic drugs and their therapeutic use Copeland, Robert A.; Albright, Charles F.; Combs, INVENTOR(S):

Andrew P.; Dowling, Radine L.; Graciani, Nilsa R.; Han, Wei; Higley, C. Anne; Huang, Pearl S.; Yue, Eddy

W.; Dimeo, Susan V.

Dupont Pharmaceuticals Company, USA PATENT ASSIGNEE(S):

SOURCE: PCT Int. Appl., 203 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

```
PATENT NO.
                 KIND DATE
                                        APPLICATION NO. DATE
     _____
    WO 2001068145 A2 20010920
                                        WO 2001-US8589 20010315
    WO 2001068145
                     A3 20020711
        W: AT, AU, BR, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, HU, IN, JP,
            KR, LT, LU, LV, MX, NZ, PL, PT, RO, RU, SE, SG, SI, SK, UA, VN,
            ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
            PT, SE, TR
                           20020801
                                         US 2001-808832
                                                          20010315
    US 2002103133
                     Al
                                       US 2000-189387P P 20000315
PRIORITY APPLN. INFO.:
OTHER SOURCE(S):
                       MARPAT 135:273218
    This invention is directed to antineoplastic agents conjugated to
    enzyme-cleavable peptides comprising the amino acid recognition sequence
    of a membrane-bound and/or cell-secreted peptidase. The conjugated
    compds. are for use as chemotherapeutic agents in the targeted treatment
    of cancers. Claimed peptide sequences include Cap-Paa-Xa2-Gly-Xp1-Laa,
    where Cap is an N-terminus group R, Xa4 or R-Xa4 (R is an amino capping
    group, Xa4 is an amino acid), Paa is Pro, 4-hydroxyproline (Hyp),
    2-carboxyazetidine (Aze), homo-Pro, cyclohexylglycine (Chg),
    4-fluorophenylalanine (Fph), nipecotic acid (Npa), 4-
    thiazolidinecarboxylic acid (Tzc), or proline mimetic; Xa2 is an amino
    acid; Xp1 is is an amino acid wherein -Gly-Xp1- or -Sar-Xp1 form a bond
    cleavable by a matrixin; Laa is an amino acid, e.g., Leu, Ile, Nle,
    .beta.-homo-Leu, homoleucine, homoserine, Ala and cyclohexylalanine.
    Thus, peptide conjugate Ac-PLGLYL-Dox (Dox = doxorubicin) was prepd. by
    the solid phase method and evaluated for stability in blood and cleavage
    with MMPs and neprilysin.
IT
    360780-48-9P
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
    BIOL (Biological study); PREP (Preparation); USES (Uses)
       (prepn. of antineoplastic agents conjugated to enzyme-cleavable
       peptides)
    362675-79-4 362676-88-8 362677-10-9
IT
    RL: PRP (Properties)
       (unclaimed protein sequence; prepn. of peptidase-cleavable, targeted
       antineoplastic drugs and their therapeutic use)
FILE 'REGISTRY' ENTERED AT 13:09:34 ON 23 OCT 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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COPYRIGHT (C) 2002 American Chemical Society (ACS)
Property values tagged with IC are from the ZIC/VINITI data file
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provided by InfoChem.

STRUCTURE FILE UPDATES: 22 OCT 2002 HIGHEST RN 464152-74-7 DICTIONARY FILE UPDATES: 22 OCT 2002 HIGHEST RN 464152-74-7

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches. Crossover limits have been increased. See HELP CROSSOVER for details. Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf => s 144 L3 L5 => d rn cn 1c nte sql kwic can tot 15 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2002 ACS 362677-10-9 REGISTRY CN 185: PN: WOO168145 SEQID: 186 unclaimed protein (9CI) (CA INDEX NAME) STN Files: CA, CAPLUS, TOXCENTER, USPATFULL LC ___________ ----- location ----description Aaa-1 uncommon uncommon Aaa-5 ______ SQL 7 SQL 7 SEQ 1 XPLGXYL ====== HITS AT: 1~7 **RELATED SEQUENCES AVAILABLE WITH SEQLINK** REFERENCE 1: 135:273218 L5 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2002 ACS RN 362676-88-8 REGISTRY CN 175: PN: WO0168145 SEQID: 176 unclaimed protein (9CI) (CA INDEX NAME) STN Files: CA, CAPLUS, TOXCENTER, USPATFULL NTE

type ----- location ----- description

SQL 7 SQL 7

uncommon

uncommon

SEQ 1 XPLGXYL
HITS AT: 1-7

Aaa-1

Aaa-5

Russel 09/808,832Page 4

```
**RELATED SEQUENCES AVAILABLE WITH SEQLINK**
REFERENCE 1: 135:273218
   ANSWER 3 OF 4 REGISTRY COPYRIGHT 2002 ACS
RN 362675-79-4 REGISTRY
CN 104: PN: WO0168145 SEQID: 105 unclaimed protein (9CI) (CA INDEX NAME)
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
______
            ----- location -----
                                    description
uncommon Aaa~1
uncommon Aaa~5
______
SOL 7
SQL 7
SEO 1 XPLGXYL
HITS AT: 1-7
**RELATED SEQUENCES AVAILABLE WITH SEQLINK**
REFERENCE 1: 135:273218
   ANSWER 4 OF 4 REGISTRY COPYRIGHT 2002 ACS
L5
   360780-48-9 REGISTRY
   5,12-Naphthacenedione, 10-[[3-[(N-acetyl-L-.gamma.-glutamyl-L-prolyl-L-
   leucylglycyl-.alpha.-aminobenzenebutanoyl-L-tyrosyl-L-leucyl)amino]-2,3,6-
   trideoxy-.alpha.-L-lyxo-hexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,8,11-
   trihydroxy-8-(hydroxyacetyl)-1-methoxy-, (85,105)- (9CI) (CA INDEX NAME)
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
NTE modified (modifications unspecified)
_____
       ----- location -----
uncommon Ggu-1
           Aaa-5
uncommon
__________
SOL 7
      1 XPLGXYL
SEO
        ======
HITS AT: 1-7
REFERENCE 1: 135:273218
```

OM protein - protein search, using sw model

Run on:

October 23, 2002, 13:41:42; Search time 30 Seconds

(without alignments)

25.917 Million cell updates/sec

Title:

US-09-808-832-186

Perfect score: 30

Sequence:

1 XPLGXYL 7

Scoring table: BLOSUM62

Gapop 10.0, Gapext 0.5

Searched:

747574 seqs, 111073796 residues

Total number of hits satisfying chosen parameters: 135323

Minimum DB seq length: 0 Maximum DB seq length: 10

Post-processing: Minimum Match 0%

Maximum Match 100% Listing first 45 summaries

Database:

A Geneseq 032802:*

- 1: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
- 2: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
- 3: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:*
- 4: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:*
- 5: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1984.DAT:*
- 6: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1985.DAT:*
- 7: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1986.DAT:*
- 8: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1987.DAT:*
- 9: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1988.DAT:*
- 10: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1989.DAT:*
- 11: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1990.DAT:*
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- 13: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1992.DAT:*
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- 21: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2000.DAT:*
- 22: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result	Ć.	Query		Description
No.	Scor	e Mai	ch Length DB ID	Description
1	23	76.7	6 22 AAU07722	Human matrix type-
2	23	76.7	8 19 AAW52141	Matrix metalloprot
3	23	76.7	8 22 AAB97518	Substituted phosph
4	23	76.7	10 21 AAB51837	Human secreted pro
5	23	76.7	10 22 AAB97519	Substituted phosph
6	22	73.3	9 20 AAY48081	Immunogenic peptid
7	21	70.0	8 19 AAW54885	Isozyme-specific a
8	21	70.0	9 20 AAY48098	Immunogenic peptid
9	21	70.0	9 22 AAU06336	Human Leukocyte An
10	21	70.0	10 20 AAY46811	Immunogenic peptid
11	20	66.7	10 22 AAG96570	Human complementar
12	19	63.3	6 18 AAW28950	Opioid peptide. S
13	19	63.3	6 18 AAW24311	New peptide which
14	19	63.3	6 20 AAY23060	Opioid peptide whi
15	19	63.3	7 6 AAP50083	Thiopeptolide havi
16	19	63.3	8 20 AAW89344	Peptide SEQ ID NO:
17	19	63.3	10 15 AAR61665	Peptide fragment (
18	18	60.0	6 21 AAB37325	Peptide linker #10
19	18	60.0	6 21 AAB15681	Matrix metalloprot
20	18	60.0	6 21 AAB22834	Matrix metalloprot
21	18	60.0	6 21 AAB01558	Collagenase substr
22	18	60.0	6 22 AAU07359	Metalloproteinase
23	18	60.0	6 22 AAB67721	Amino acid sequenc
24	18	60.0	6 22 AAB67722	Amino acid sequenc
25	18	60.0	6 22 AAB73911	MMP-2 protease cle
26	18	60.0	6 22 AAB73912	MT1-MMP protease c
27	18	60.0	6 22 AAB35976	Collagenase cleava
28	18	60.0	7 15 AAR67143	Enkephalin derived

29	18	60.0	7	17	AAR87156	Variant bovine gro
30	18	60.0	7	18	AAW24983	Recombinant human
31	18	60.0	7	22	AAG65041	Human matrix metal
32	18	60.0	7	22	AAB75135	Gelatinase recogni
33	18	60.0	7	22	AAB74039	Synthetic collagen
34	18	60.0	7	22	AAB35980	Gelatinase cleavab
35	18	60.0	8	14	AAR35857	Hepatitis C virus
36	18	60.0	8	14	AAR35858	Hepatitis C virus
37	18	60.0	8	14	AAR35859	Hepatitis C virus
38	18	60.0	8	14	AAR35860	Hepatitis C virus
39	18	60.0	8	16	AAR73431	Human TSH receptor
40	18	60.0	8	16	AAR73432	Human TSH receptor
41	18	60.0	8	19	AAY20465	Human microtubule
42	18	60.0	8	22	AAB97545	Substituted phosph
43	18	60.0	8	22	AAB62230	MMP substrate octa
44	18	60.0	8	22	AAB86845	MMP-2 and MMP-9 bi
45	18	60.0	9	15	AAY38358	PAP-derived HLA-bi

ALIGNMENTS

```
RESULT 1
AAU07722
ID AAU07722 standard; peptide; 6 AA.
XX
AC AAU07722;
XX
DT 21-NOV-2001 (first entry)
XX
DE Human matrix type-1-metalloprotease protease cleavage site.
XX
KW Human matrix type-1-metalloprotease; MT1-MMP;
KW protease cleavage site; cytostatic; antirheumatic;
KW antirheumatic; antiarthritic; immunosuppressive; antiinflammatory;
KW anti-HIV; virucide; viral display; gene therapy; cancer; inflammation;
KW rheumatoid arthritis; autoimmune disease; infection; AIDS;
KW acquired immunodeficiency syndrome; herpes; hepatitis;
KW protease inhibitor; drug screening.
XX
OS Homo sapiens.
XX
PN WO200162980-A1.
XX
```

PD 30-AUG-2001.

```
XX
PF 23-FEB-2001; 2001WO-US05859.
XX
PR 25-FEB-2000; 2000US-0185203.
XX
PA (CAMB-) CAMBRIDGE DRUG DISCOVERY LTD.
XX
PI Russell SJ, Chadwick MP;
XX
DR WPI; 2001-541706/60.
XX
PT Identifying protease inhibitors by assaying for the presence of a
PT transferable label from a viral display package in the presence of test
PT compound, where an increase in cell label indicates the compound as a
PT
    protease inhibitor -
XX
PS Example 1; Page 20; 46pp; English.
XX
CC The invention relates to identifying a test substance for the ability to
CC inhibit a protease by contacting a protease-containing target cell with a
CC viral display package (comprising a receptor-binding polypeptide which
CC binds to a receptor on the surface of the cell, a protease cleavage site
CC for the protease expressed by the cell, and a fusion-mediating
CC polypeptide, such that proteolytic cleavage of the cleavage site does not
CC permit substantial transfer of the transferable label from the phage
CC package to the cell), and detecting a transferable label to indicate if
CC the substance is a protease inhibitor. The method is useful for
CC identifying a test substance for its ability to inhibit a protease. The
CC delivery of an expressible polynucleotide to a target cell is also
CC possible, and both methods are applicable for a number of target cells.
CC The methods are useful for the rapeutic purposes and as a model system for
CC optimising delivery of transferable labels. The protease inhibitors
CC identified are useful for treating cancer, inflammation, rheumatoid
CC arthritis, autoimmune diseases, infections including AIDS (acquired
CC immunodeficiency syndrome), herpes and hepatitis. A whole range of
CC proteins, peptides, antisense transcripts and ribozyme sequences can be
CC encoded within an expressible polynucleotide (i.e. a gene therapy
CC technique) and delivered to a target cell for a therapeutic effect. The
CC target cells may also be cells infected by pathogens such as HIV virus,
CC rhinovirus, herpes virus, hepatitis virus or other infectious agents
CC which expresses proteases. The present sequence is a human matrix type-1-
CC metalloprotease (MT1-MMP) protease cleavage site which may be used as a
CC component of the viral display package used in the method of the
CC invention.
XX
```

```
SQ Sequence 6 AA;
                    76.7%; Score 23; DB 22; Length 6;
 Query Match
 Best Local Similarity 80.0%; Pred. No. 6.4e+05;
 Matches 4; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy
      2 PLGXY 6
      \parallel \parallel \parallel
Db
      1 PLGLY 5
RESULT 2
AAW52141
ID AAW52141 standard; Peptide; 8 AA.
XX
AC AAW52141;
XX
DT 20-JUL-1998 (first entry)
XX
DE Matrix metalloproteinase MMP-9 substrate MR1.
XX
KW Membrane-type matrix metalloproteinase; MT-MMP; MT1-MMP;
KW matrix metalloproteinase 12; MMP-12; osteoclastic proteinase;
KW osteoclast; inhibitor; metabolic bone disease; osteoporosis;
KW bone resorption; metastasis; tumour; cancer; ulcer; arthritis;
KW periodontal disease; therapy.
XX
OS Synthetic.
XX
FH Key
               Location/Qualifiers
FT Modified-site 1
FT
             /note= "Abz-glycine"
FT Cleavage-site 4..5
FT Modified-site 6
FT
             /note= "Norleucine"
FT Modified-site 9
             /note= "tyrosine(NO2)"
FT
XX
PN WO9804287-A1.
XX
PD 05-FEB-1998.
XX
PF 29-JUL-1997; 97WO-EP04110.
XX
```

PR 30-JUL-1996; 96GB-0015976.

```
XX
PA (CLIN-) CENT CLINICAL & BASIC RES.
PI Delaisse J, Foged NT, Meldal M;
XX
DR WPI; 1998-130425/12.
XX
PT Use of inhibitors of protease(s) involved in osteoclast activity -
PT useful for, e.g. treating metabolic bone disease such as
PT osteoporosis
XX
PS Example 6b; Page 44; 110pp; English.
XX
CC Peptide MR1 is a substrate of matrix metalloproteinase MMP-9. Novel
CC peptide substrate mimicking MMP-inhibitors (see AAW52132-33) are
CC promising agents for use in treatment of bone metabolic disease.
CC They can be used to inhibit proteinases involved in the
CC recruitment, proliferation, differentiation or migration of
CC osteoclast precursor cells or in the migation, fusion, attachment,
CC polarisation, removal of mineralised osseous substance or death of
CC osteoclasts. The inhibitors reduce the rate of bone resorption
CC and are used to treat or prevent, e.g. osteoporosis and osteolytic
CC bone metastases. They are also useful in, e.g. treatment of
CC cancer, ulcers, arthritis and periodontal disease.
XX
SQ Sequence 8 AA;
                     76.7%; Score 23; DB 19; Length 8;
 Query Match
 Best Local Similarity 80.0%; Pred. No. 6.4e+05;
 Matches 4; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Οv
      2 PLGXY 6
Db
      2 PLGLY 6
Search completed: October 23, 2002, 13:42:22
Job time: 32 secs
```

OM protein - protein search, using sw model

Run on: Octo

October 23, 2002, 13:41:43; Search time 24 Seconds

(without alignments)

50.457 Million cell updates/sec

Title:

US-09-808-832-186

Perfect score: 30

Sequence: 1 XPLGXYL 7

Scoring table: BLOSUM62

Gapop 10.0, Gapext 0.5

Searched:

562222 seqs, 172994929 residues

Total number of hits satisfying chosen parameters: 1088

Minimum DB seq length: 0 Maximum DB seq length: 10

Post-processing: Minimum Match 0%

Maximum Match 100% Listing first 45 summaries

Database: SPTREMBL_19:*

1: sp archea:*

2: sp bacteria:*

3: sp_fungi:*

4: sp human:*

5: sp invertebrate:*

6: sp_mammal:*

7: sp mhc:*

8: sp_organelle:*

9: sp phage:*

10: sp plant:*

11: sp rodent:*

12: sp virus:*

13: sp_vertebrate:*

14: sp unclassified:*

15: sp_rvirus:*

16: sp_bacteriap:*17: sp_archeap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	SUMMARIE
%	

Result		Query			
No.	Scor	re Mat	ch Lengt	h DB ID	Description
1	17	56.7		Q9S905	Q9s905 glycine max
2	16	53.3	8 12	Q89498	Q89498 murine hepa
3	15	50.0		Q94IS6	Q94is6 pinus taeda
4	14	46.7	8 12	Q83349	Q83349 murine coro
5	13	43.3	84()9P0K3	Q9p0k3 homo sapien
6	13	43.3	9 11	Q9QWT	Q9qwt0 mus musculu
7	13	43.3	10 4	060912	O60912 homo sapien
8	12	40.0	8 2 ()9 RQ 49	Q9rq49 buchnera ap
9	12	40.0	84()96RN9	Q96rn9 homo sapien
10	12	40.0	8 8 3	P92422	P92422 psathyrosta
11	12	40.0	8 8	P92373	P92373 haynaldia v
12	12	40.0	8 8]	P93985	P93985 aegilops co
13	12	40.0	8 8 3	P92404	P92404 lophopyrum
14	12	40.0	8 8 3	P92426	P92426 pseudoroegn
15	12	40.0	8 8 3	P93973	P93973 eremopyrum
16	12	40.0	8 8 3	P93970	P93970 eremopyrum
17	12	40.0	8 8 3	P92388	P92388 henrardia p
18	12	40.0	8 8 3	P92428	P92428 peridictyon
19	12	40.0	8 8 1	P92391	P92391 heteranthel
20	12	40.0	8 8 1	292227	P92227 crithopsis
21	12	40.0	8 8 1	293963	P93963 psathyrosta
22	12	40.0	8 8 1	293961	P93961 psathyrosta
23	12	40.0	881	292215	P92215 amblyopyrum
24	12	40.0		93981	P93981 crithodium
25	12	40.0	881	292431	P92431 aegilops ta
26	12	40.0	881	92222	P92222 bromus iner
27	12	40.0		292443	P92443 taeniatheru
28	12	40.0	881	292382	P92382 hordeum bra
29	12	40.0		292384	P92384 hordeum mur
30	12	40.0		92386	P92386 hordeum mar
31	12	40.0		92394	P92394 hordeum vul
32	12	40.0		93965	P93965 secale stri
33	12	40.0	8 8 1	293966	P93966 aegilops sp

34	12	40.0	8 8 P 92219	P92219 australopyr
35	12	40.0	8 8 P93992	P93992 australopyr
36	12	40.0	8 8 P92441	P92441 thinopyrum
37	12	40.0	8 8 P93955	P93955 festucopsis
38	12	40.0	8 8 P92211	P92211 agropyron c
39	12	40.0	8 8 P93959	P93959 hordeum ere
40	12	40.0	8 8 P93957	P93957 festucopsis
41	12	40.0	9 13 P83057	P83057 bombina var
42	12	40.0	9 13 P83056	P83056 bombina var
43	12	40.0	10 2 Q9AE19	Q9ae19 streptococc
44	12	40.0	10 4 Q9H1I5	Q9h1i5 homo sapien
45	12	40.0	10 4 Q14096	Q14096 homo sapien

```
ALIGNMENTS
RESULT 1
Q9S905
ID Q9S905
              PRELIMINARY;
                                PRT; 10 AA.
AC Q9S905;
DT 01-MAY-2000 (TrEMBLrel. 13, Created)
DT 01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT 01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DE S3 PEPTIDE.
OS Glycine max (Soybean).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
OC eurosids I; Fabales; Fabaceae; Papilionoideae; Phaseoleae; Glycine.
OX NCBI_TaxID=3847;
RN [1]
RP SEQUENCE.
RX MEDLINE=92232221; PubMed=1368037;
RA Hirano H., Kagawa H., Okubo K.;
RL Phytochemistry 31:731-735(1992).
SQ SEQUENCE 10 AA; 975 MW; 3C733271A879D1B7 CRC64;
                   56.7%; Score 17; DB 10; Length 10;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 1.4e+03;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
     2 PLG 4
Qy
     \mathbb{H}
Db
     8 PLG 10
```

Search completed: October 23, 2002, 13:43:10

Job time: 25 secs

OM protein - protein search, using sw model

Run on:

October 23, 2002, 13:41:42; Search time 10 Seconds

(without alignments)

27.104 Million cell updates/sec

Title:

US-09-808-832-186

Perfect score: 30

Sequence:

1 XPLGXYL 7

Scoring table: BLOSUM62

Gapop 10.0, Gapext 0.5

Searched:

105224 segs, 38719550 residues

Total number of hits satisfying chosen parameters: 349

Minimum DB seq length: 0 Maximum DB seq length: 10

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database:

SwissProt 40:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

%

Result No.		Query re Mat		ngth DB ID	Description
1 2	17	56.7 56.7	9	OXYA_SQUAC OXYT_RABIT	P42999 squalus aca P32878 oryctolagus
3 4 5	16	56.7 53.3 50.0	8	TKL1_LOCMI UF06_MOUSE ISOT_CYPCA	P16223 locusta mig P38644 mus musculu P42993 cyprinus ca

6	15 50.0	9 1 OXYT_BUFRE	P42995 bufo regula
7	15 50.0	9 1 OXYT_OCTVU	P80027 octopus vul
8	14 46.7	7 1 FAR5_HIRME	P42564 hirudo medi
9	14 46.7	9 1 OXYA_SCYCA	P42996 scyliorhinu
10	14 46.7	9 1 OXYF_SCYCA	P42997 scyliorhinu
11	14 46.7	9 1 OXYV_SQUAC	P43000 squalus aca
12	13 43.3	10 1 TKL2_LOCMI	P16224 locusta mig
13	12 40.0	8 1 AL17_CARMA	P81820 carcinus ma
14	12 40.0	9 1 AL11_CARMA	P81814 carcinus ma
15	12 40.0	9 1 NEUU_CAVPO	P34966 cavia porce
16	12 40.0	9 1 OXYT_EISFO	P42998 eisenia foe
17	12 40.0	9 1 TKC1_CALVO	P41517 calliphora
18	12 40.0	10 1 AMPN_HELAM	P81731 helicoverpa
19	12 40.0	10 1 CU30_LOCMI	P11735 locusta mig
20	12 40.0	10 1 ESTA_SCHGA	P81012 schizaphis
21	12 40.0	10 1 RLA2_MOUSE	P99027 mus musculu
22	12 40.0	10 1 TKL3_LOCMI	P30249 locusta mig
23	11 36.7	4 1 FAR3_HIRME	P42562 hirudo medi
24	11 36.7	5 1 PRCT_PERAM	P01373 periplaneta
25	11 36.7	6 1 VP19 HSV1K	P23210 herpes simp
26	11 36.7	7 1 FAR2_ASCSU	P31890 ascaris suu
27	11 36.7	7 1 GFRP_MOUSE	P99025 mus musculu
28	11 36.7	7 I MNPI_LEPDE	P42984 leptinotars
29	11 36.7	8 1 AL15_CARMA	P81818 carcinus ma
30	11 36.7	8 1 AL16_CARMA	P81819 carcinus ma
31	11 36.7	8 1 ALL6_CYDPO	P82157 cydia pomon
32	11 36.7	8 1 ALL8_CARMA	P81811 carcinus ma
33	11 36.7	8 1 ALL9_CARMA	P81812 carcinus ma
34	11 36.7	9 1 CONO_CONGE	P05486 conus geogr
35	11 36.7	9 1 CONO_CONST	P05487 conus stria
36	11 36.7	9 1 DNF1_LOCMI	P16339 locusta mig
37	11 36.7	9 1 FAR9_ASCSU	P43172 ascaris suu
38	11 36.7	9 1 LITO_LITAU	P08945 litoria aur
39	11 36.7	9 1 OXYT_CYPCA	P23879 cyprinus ca
40	11 36.7	9 1 OXYT_RAJCL	P42994 raja clavat
41	11 36.7	9 1 TRP4_LEUMA	P81736 leucophaea
42	11 36.7	9 1 UPA3_HUMAN	P30089 homo sapien
43	11 36.7	10 1 AL19_CARMA	P81822 carcinus ma
44	11 36.7	10 1 ANG1_BOTJA	Q10581 bothrops ja
45	11 36.7	10 1 BRK_ONCMY	Q9prz1 oncorhynchu

```
RESULT 1
OXYA SQUAC
                                    PRT; 9 AA.
ID OXYA SQUAC
                     STANDARD;
AC P42999;
DT 01-NOV-1995 (Rel. 32, Created)
DT 01-NOV-1995 (Rel. 32, Last sequence update)
DT 01-NOV-1995 (Rel. 32, Last annotation update)
DE Aspartocin (Aspargtocin).
OS Squalus acanthias (Spiny dogfish).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Chondrichthyes;
OC Elasmobranchii; Squalea; Squaloidei; Squalidae; Squalus.
OX NCBI TaxID=7797;
RN [1]
RP SEQUENCE.
RX MEDLINE=73031727; PubMed=5083097;
RA Acher R., Chauvet J., Chauvet M.-T.;
RT "Phylogeny of the neurohypophysial hormones. Two new active peptides
RT isolated from a cartilaginous fish, Squalus acanthias.";
RL Eur. J. Biochem. 29:12-19(1972).
RN [2]
RP SEQUENCE.
RX MEDLINE=72128038; PubMed=4622083;
RA Acher R., Chauvet J., Chauvet M.-T., Fontaine M.;
RT "Identification of 2 new neurohypophyseal hormones, valitocin (Val8-
RT oxytocin) and aspartocin (Asn4-oxytocin) in a selachian fish, the
RT spiny dog-fish (Squalus acanthias).";
RL C. R. Acad. Sci., D. Sci. Nat. 274:313-316(1972).
CC -!- SIMILARITY: BELONGS TO THE VASOPRESSIN/OXYTOCIN FAMILY.
DR InterPro; IPR000981; Neurhypophys horm.
DR Pfam; PF00220; hormone4; 1.
DR PROSITE; PS00264; NEUROHYPOPHYS_HORM; 1.
KW Hormone: Amidation.
FT DISULFID
                 1
FT MOD RES
                      9
                           AMIDATION.
SO SEQUENCE 9 AA; 996 MW; 17F8376EB444404B CRC64;
                   56.7%; Score 17; DB 1; Length 9;
 Ouery Match
 Best Local Similarity 100.0%; Pred. No. 1e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
     2 PLG 4
Qy
     111
Db
     7 PLG 9
Search completed: October 23, 2002, 13:42:39
Job time: 12 secs
```

OM protein - protein search, using sw model

Run on:

October 23, 2002, 13:41:47; Search time 14 Seconds

(without alignments)

48.045 Million cell updates/sec

Title:

US-09-808-832-186

Perfect score: 30

Sequence:

1 XPLGXYL 7

Scoring table: BLOSUM62

Gapop 10.0, Gapext 0.5

Searched:

283138 seqs, 96089334 residues

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 10

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database: PIR 71:*

1: pir1:*

2: pir2:*

3: pir3:*

4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

%

Result Query

No. Score Match Length DB ID Description

1 17 56.7 4 2 A32039

tyrosine-melanocyt

1099

2	17 56.7	8 4 154017	granulocyte-colony
3	17 56.7	9 2 A91466	oxytocin - hippopo
4	17 56.7	9 2 A92774	oxytocin - spotted
5	17 56.7	9 2 A93147	oxytocin - finback
6	17 56.7	9 2 A93408	oxytocin - Austral
7	17 56.7	9 2 B90667	oxytocin - rabbit
8	16 53.3	8 2 PT0311	Ig heavy chain CRD
9	15 50.0	8 2 PT0368	Ig gamma chain C r
10	15 50.0	9 2 A61364	isotocin - common
11	14 46.7	7 2 A11483	aspartate transami
12	13 43.3	9 2 S15850	vitamin D3 26-mono
13	13 43.3	9 2 S36850	Ig heavy chain V r
14	13 43.3	9 2 G 41946	T-cell receptor ga
15	13 43.3	10 2 PT0038	glutathione transf
16	12 40.0	5 2 B61445	Leu-enkephalin - b
17	12 40.0	6 2 JN0861	peptidyl-dipeptida
18	12 40.0	8 2 PT0530	T-cell receptor be
19	12 40.0	9 2 S63491	dissimilatory sulf
20	12 40.0	9 2 S36898	ribosomal protein
21	12 40.0	9 2 PC2021	oxytocin-related p
22	12 40.0	9 2 PH1591	Ig H chain V-D-J r
23	12 40.0	10 1 ECLQ1M	tachykinin I - mig
24	12 40.0	10 1 ECLQ3M	tachykinin III - m
25	12 40.0	10 2 A43405	6-phosphofructo-2-
26	12 40.0	10 2 A60410	beta-neoendorphin
27	12 40.0	10 2 H60588	sperm-activating p
28	12 40.0	10 2 PT0243	Ig heavy chain CRD
29	12 40.0	10 2 PH1633	Ig H chain V-D-J r
30	12 40.0	10 2 PT0215	T-cell receptor be
31	12 40.0	10 2 PH0944	T-cell receptor be
32	12 40.0	10 2 PH0926	T-cell receptor be
33	12 40.0	10 2 A59173	nuclease Bh1 (EC 3
34	11 36.7	5 1 HOROHA	proctolin - Americ
35	11 36.7	5 2 A60411	proctolin - Atlant
36	11 36.7	6 2 B44510	hypothetical prote
37	11 36.7	7 2 S42407	gramicidin S synth
38	11 36.7	7 2 S78024	ribosomal protein
39	11 36.7	7 2 148105	dihydrofolate redu
40	11 36.7	7 2 I48086	DNA topoisomerase
41	11 36.7	7 2 PD0029	pev-kinin 1 - pena
42	11 36.7	7 4 S15597	orf 4 rara 5'-regi
43	11 36.7	8 2 G33098	205K exoantigen -
44	11 36.7	8 2 S10783	enamelin f - bovin
45	11 36.7	8 2 A35180	neutral proteinase

ALIGNMENTS

RESULT 1

A32039

tyrosine-melanocyte-stimulating hormone release-inhibiting factor 1 - bovine

C; Species: Bos primigenius taurus (cattle)

C;Date: 31-Jul-1989 #sequence revision 31-Jul-1989 #text change 18-Aug-2000

C;Accession: A32039 R;Horvath, A.; Kastin, A.J.

J. Biol. Chem. 264, 2175-2179, 1989

A; Title: Isolation of tyrosine-melanocyte-stimulating hormone release-inhibiting factor 1 from bovine

brain tissue.

A;Reference number: A32039; MUID:89123285

A;Accession: A32039 A;Molecule type: protein A;Residues: 1-4 <HOR> A;Experimental source: brain

C;Superfamily: unassigned animal peptides C;Keywords: amidated carboxyl end

F;4/Modified site: amidated carboxyl end (Gly) #status experimental

Query Match 56.7%; Score 17; DB 2; Length 4; Best Local Similarity 100.0%; Pred. No. 2.8e+05; Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 PLG 4 ||| Db 2 PLG 4

Search completed: October 23, 2002, 13:43:51

Job time: 15 secs

OM protein - protein search, using sw model

Run on: October 23, 2002, 13:41:47; Search time 13 Seconds

(without alignments)

13.152 Million cell updates/sec

Title: US-09-808-832-186

Perfect score: 30

Sequence: 1 XPLGXYL 7

Scoring table: BLOSUM62

Gapop 10.0, Gapext 0.5

Searched: 231628 seqs, 24425594 residues

Total number of hits satisfying chosen parameters: 70601

Minimum DB seq length: 0 Maximum DB seq length: 10

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database: Issued Patents AA:*

1: /cgn2_6/ptodata/1/iaa/5A COMB.pep:*

2: /cgn2 6/ptodata/1/iaa/5B COMB.pep:*

3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*

4: /cgn2 6/ptodata/1/iaa/6B COMB.pep:*

5: /cgn2 6/ptodata/1/iaa/PCTUS COMB.pep:*

6: /cgn2 6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

%

Result Query

No. Score Match Length DB ID

Description

Sequence 7, Appli 70.0 8 4 US-08-953-033-7 1 21 5 2 US-08-350-260A-321 Sequence 321, App 2 19 63.3 Sequence 80, Appl 3 19 63.3 6 1 US-08-487-006-80 Sequence 80, Appl 19 63.3 6 2 US-08-488-659A-80 4 5 18 60.0 6 4 US-09-208-684-12 Sequence 12, Appl Sequence 24, Appl 6 18 60.0 6 4 US-09-561-500-24 Sequence 24, Appl 7 18 60.0 6 4 US-09-561-108-24 Sequence 16, Appl 8 18 60.0 7 1 US-08-340-045-16 9 18 60.0 7 2 US-08-934-222-136 Sequence 136, App Sequence 136, App 10 18 60.0 7 2 US-08-933-402-136 Sequence 136, App 11 18 60.0 7 2 US-09-207-621-136 12 18 60.0 7 2 US-08-532-818-136 Sequence 136, App 60.0 7 3 US-08-871-302A-16 Sequence 16, Appl 13 18 14 18 60.0 7 3 US-09-231-797-136 Sequence 136, App 60.0 7 3 US-08-934-224-136 Sequence 136, App 15 18 60.0 7 3 US-08-933-843-136 Sequence 136, App 16 18 60.0 7 4 US-08-934-223-136 Sequence 136, App 17 18 60.0 7 4 US-09-413-492-136 Sequence 136, App 18 18 19 18 60.0 8 3 US-07-961-307-2 Sequence 2, Appli Sequence 16, Appl 20 18 60.0 8 3 US-08-335-865J-16 21 18 60.0 8 4 US-08-444-818-341 Sequence 341, App Sequence 342, App 22 18 60.0 8 4 US-08-444-818-342 23 18 60.0 8 4 US-08-444-818-343 Sequence 343, App 60.0 Sequence 344, App 24 18 8 4 US-08-444-818-344 60,0 Sequence 2, Appli 25 18 9 2 US-08-585-281-2 26 18 60.0 9 2 US-08-585-281-3 Sequence 3, Appli 27 18 60.0 9 2 US-08-585-281-5 Sequence 5, Appli 28 18 60.0 9 2 US-08-585-281-6 Sequence 6, Appli 29 18 60.0 9 3 US-08-159-339A-619 Sequence 619, App 18 60.0 10 1 US-08-250-789A-94 Sequence 94, Appl 30 Sequence 95, Appl 31 18 60.0 10 1 US-08-250-789A-95 Sequence 96, Appl 32 18 60.0 10 1 US-08-250-789A-96 10 1 US-08-250-789A-97 33 18 60.0 Sequence 97, Appl 34 17 56.7 4 1 US-08-219-156-5 Sequence 5, Appli 17 Sequence 5, Appli 35 56.7 4 1 US-08-238-089-5 Sequence 6, Appli 17 56.7 4 1 US-08-238-089-6 36 37 17 56.7 4 1 US-08-366-783-8 Sequence 8, Appli 56.7 Sequence 5, Appli 38 17 4 1 US-08-432-651A-5 56.7 Sequence 6, Appli 39 17 4 1 US-08-432-651A-6 56.7 4 1 US-08-798-897-49 Sequence 49, Appl 40 17 17 56.7 4 2 US-08-707-237A-97 Sequence 97, Appl 41 56.7 42 17 4 2 US-08-978-523-49 Sequence 49, Appl 17 56.7 Sequence 11, Appl 43 4 2 US-08-846-021A-11 44 17 56.7 4 3 US-08-642-246-17 Sequence 17, Appl

ALIGNMENTS

RESULT 1

US-08-953-033-7

; Sequence 7, Application US/08953033

: Patent No. 6165977

GENERAL INFORMATION:

APPLICANT: Mochly-Rosen, Daria

TITLE OF INVENTION: ISOZYME-SPECIFIC ACTIVATORS

TITLE OF INVENTION: OF PROTEIN KINASE C - METHODS AND COM

TITLE OF INVENTION: POSITIONS NUMBER OF SEQUENCES: 23 CORRESPONDENCE ADDRESS: ADDRESSEE: Dehlinger & Associates STREET: 350 Cambridge Ave., Suite 250

CITY: Palo Alto STATE: CA COUNTRY: USA ZIP: 94306

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette COMPUTER: IBM Compatible OPERATING SYSTEM: DOS

SOFTWARE: FastSEQ for Windows Version 2.0

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/953,033

FILING DATE: 17-OCT-1997 CLASSIFICATION: 530 PRIOR APPLICATION DATA:

APPLICATION NUMBER: 60/028,724

FILING DATE: 18-OCT-1996

ATTORNEY/AGENT INFORMATION:

NAME: Petithory, Joanne R.

REGISTRATION NUMBER: 42,995

REFERENCE/DOCKET NUMBER: 8600-0174.30

TELECOMMUNICATION INFORMATION:

TELEPHONE: 650-324-0880 TELEFAX: 650-324-0960

TELEX:

: INFORMATION FOR SEQ ID NO: 7: SEQUENCE CHARACTERISTICS:

LENGTH: 8 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: peptide

FEATURE:

NAME/KEY: Other LOCATION: 1...8

OTHER INFORMATION: epsilonV1-7.1

US-08-953-033-7

Query Match 70.0%; Score 21; DB 4; Length 8;

Best Local Similarity 60.0%; Pred. No. 1.7e+05;

Matches 3; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 2 PLGXY 6

1:11

Db 4 PIGDY 8

Search completed: October 23, 2002, 13:43:30

Job time: 15 secs